

## SECTION 5. USE OF AIRPLANES ISSUED EXPERIMENTAL/EXHIBITION AIRWORTHINESS CERTIFICATES IN FLIGHT INSTRUCTION FOR COMPENSATION OR HIRE

**1. BACKGROUND.** Recently, questions have been raised concerning the use of surplus military aircraft certificated in the experimental/exhibition category for flight instruction for compensation or hire. Title 14 of the Code of Federal Regulations (14 CFR) part 91, § 91.319(a) states, in pertinent part, that no person may operate an aircraft that has an experimental certificate for other than the purpose for which the certificate was issued, or for carrying persons or property for compensation or hire. Title 14 CFR part 21, § 21.191 provides, in pertinent part, that experimental certificates are issued only for the following purposes:

- research and development;
- showing compliance with regulations;
- crew training;
- exhibition;
- air racing;
- market surveys; and
- operating amateur-built aircraft.

*A. Experimental/Exhibition Category.* Experimental/exhibition means exhibiting the aircraft's flight capabilities, performance, or unusual characteristics at airshows or in motion pictures, television, or similar productions; and the maintenance or exhibition flight proficiency, including flying to and from such airshows and productions by the persons exhibiting such aircraft.

*B. Operating Rules.* The operating rules for large and turbojet-powered multiengine civil airplanes are contained in 14 CFR part 91, subpart F. Operators of aircraft certificated in other than the experimental category which hold no airworthiness limitations may engage in operations specified in 14 CFR § 91.501(b) and may be reimbursed for expenses for specific flights as authorized in 14 CFR § 91.501(d). However, as stated above, experimental aircraft may only be operated for the specific purpose for which they were certificated, and may not carry persons or property for compensation or hire.

*C. Letter of Authorization.* Applicants who desire a letter of authorization to operate surplus military aircraft with an experimental/exhibition certificate should receive training from qualified instructors when training from the military or the manufacturer is not

available or reasonable. However, experimental aircraft must be operated in accordance with 14 CFR.

### 2. AIRCRAFT INSTRUCTION.

*A. Use of Aircraft for Instruction.* An aircraft with an experimental airworthiness certificate may be used for crew training or flight instruction when no charges or remuneration for use of the aircraft are involved. A pilot or owner may use the services of an instructor to receive instruction in an experimental aircraft; however, a commercial operator may not provide such an aircraft for the purpose of flight instruction for hire.

*B. Flight Instructors.* A person who is the owner or operator of an experimental aircraft may receive flight instruction in that aircraft and pay for the flight instructor's services. However, this person must be the owner or operator of the aircraft in order for the flight instructor to receive compensation.

### 3. OPERATING LIMITATIONS.

*A. Order 8130.27, Certification and Operation of Aircraft Under the Experimental Purpose(s) of Research and Development, Exhibition, and/or Air Racing.* Operating Limitations provides exceptions to the prohibition of operations over densely populated areas under two circumstances:

(1) Air Traffic Control (ATC) may provide air traffic instructions to the pilot regarding directions and altitudes to be flown in the interest of safety and expeditious flow of traffic,

(2) or the pilot may encounter an emergency situation, in which case the pilot-in-command may deviate from the rules to the extent necessary to meet the emergency.

**NOTE: Even though the FSDO and the operator agree to a route of flight which presents a risk to the minimum number of persons on the surface, air traffic instructions may take precedence over the selected route.**

*B. Operating limitations may be issued permitting flight over densely populated areas or in congested airways for the purpose of takeoffs or landings.*

**NOTE: The pilot-in-command is responsible**

**for requesting a departure route that will avoid densely populated areas whenever possible. Again, air traffic instructions may have priority.**

C. Please note that "corridors" are applicable to operations at airports in Class B airspace when:

(1) the aircraft is based at that airport; and

(2) when an organized event is taking place at that airport.

**NOTE: Corridors are not specifically applicable to general operations in Class B airspace or at airports underlying Class B airspace.**

*D. Issuing Operating Limitations.* Applies to aircraft holding a special airworthiness certificate in the experimental, amateur-built category. Since Flight Standards ASI deal primarily with experimental aircraft in the exhibition and amateur-built categories, the policy described herein will be directed to the issuance of initial and amended operating limitations for amateur-built aircraft only, in accordance with the policy established by FAA Order 8130.2C. Other orders provide guidance for aircraft certificated as Experimental-Exhibition and will not be addressed here. Experimental aircraft certified for other purposes under § 21.191 (i.e., research and development, showing compliance, crew training, and market surveys) will not be subject to the guidance provided herein, as they are generally operated by manufacturers seeking type certificates. Other established policy may apply to these aircraft.

(1) *Request for Amendment to Operating Limitations.* Field inspectors may, upon request by the operator of an experimental, amateur-built aircraft, and after an appropriate evaluation of the request, issue amended operating limitations which specifically provide for flight over densely populated areas or on congested airways in accordance with the provisions of § 91.319(c). When issuing amended operating limitations, ASIs shall determine that the operating characteristics, flight test maneuvers reports, maintenance history, and functional requirements of the aircraft, reflect a degree of safe operating practices that will minimize concerns for safety of the aircraft, operator, and persons and property on the surface.

(2) *Flight Test Information.* Flight test areas are assigned to experimental aircraft to allow the operator to determine that the aircraft is controllable throughout its normal range of speeds and throughout all the

maneuvers to be executed and that the aircraft has no hazardous operating characteristics or design features (§ 91.319(b)). The FAA inspector (or designee) is responsible for issuing operating limitations in accordance with FAA Order 8130.2C, chapter 4, paragraph 142. Inspectors should consult the appropriate orders and ensure that the proper phraseology is used to eliminate ambiguity or conflict with regulatory requirements.

(a) First Flight.

i. FAA Order 8130.2C, chapter 4, paragraph 139(b)(1),(2) states: "In the case of a first flight of an aircraft from an airport surrounded by densely populated areas, but with at least one acceptable approach/departure corridor, the FAA shall ensure that a flight corridor is selected where the least number of persons and property may be subjected to possible hazards. In addition, upon leaving such an airport, the aircraft should be required to operate from an outlying airport until its controllability, airworthiness, and safety are established (§ 91.319(b)), after which the aircraft may return to its base and use the established corridor for subsequent operations."

ii. "In the case of an aircraft located at any airport surrounded by a densely populated area and lacking any acceptable approach/departure corridor, the FAA shall deny the airworthiness certificate and process the denial in accordance with (8130.2C, paragraph 88). The applicant shall be advised to relocate the aircraft by other means to a suitable airport."

**NOTE: "An acceptable approach/departure corridor may be considered to exist when the corridor provides reasonable opportunity(s) to execute an off-airport emergency landing that will not jeopardize other persons or property."**

(b) *Continued Flight Test Operations (Phase I testing).* Amateur-Built aircraft have test flight periods established as 25 hours with a type-certificated engine-propeller combination installed, or 40 hours with a non type-certificated engine/prop combination installed. The purpose of the flight test area is to prove that the aircraft is controllable and has no hazardous flying characteristics (§ 91.319(b)).

i. As a good operating practice, the pilot should maintain a record of maneuvers conducted and tested to prove controllability. This documentation would provide a significant record of maneuvers that the aircraft accomplished and may form the basis for an operator's personal pilot operating handbook.

ii. Order 8130.2C, chapter 4, paragraph 139(c) states: "In any event, the FAA inspector should not amend the operating limitations to permit flight outside the assigned flight test area until the applicant certifies and the FAA finds compliance with § 91.319(b). This finding by the FAA may be a review of the aircraft records containing a statement by the pilot that the aircraft is controllable and has no hazardous operating characteristics (§ 91.319(b)). Also, the maintenance history while in the test area must be satisfactory."

(c) *Operations After Completion of Flight Testing.* Amateur-Built aircraft which have satisfied the requirements of § 91.319(b) may be operated outside the assigned flight test area as provided by and in accordance with the issued operating limitations.

(3) *Issuing Authorizations.* Section 91.319 require the issuance of amended or revised operating limitations to permit the operation of experimental aircraft over densely populated areas, and require that considerations be given in the interest of safety in air commerce when authorizing such operations.

(a) *First Flight.* ASIs, in most cases, will not issue special authorization for flight, or takeoffs or landings over densely populated areas for aircraft attempting the first flight of the flight test period. Mitigating or special circumstances may, however, provide

justification for such authorizations and ASI's are expected to use good judgment in these situations.

(b) *Phase I Flight Testing.* Authorizations for takeoffs or landings over densely populated areas and access to corridors for flight through congested airspace, coordinated with ATC may be helpful during Phase I testing of an aircraft. The operator, however, should attempt to operate from airports or facilities that would not require special authorizations.

(c) *Operating Outside the Flight Test Area.* Once flight testing is completed and the aircraft meets the requirements of § 91.319(b), special operating limitations may be issued to experimental aircraft to permit them to operate over densely populated areas, both en route and during takeoffs and landings, and to operate within congested airways of the National Airspace System.

(d) *Previously Issued Operating Limitations.* Aircraft that have successfully completed Phase I flight testing to meet the requirements of § 91.319(b), and were issued special operating limitations authorizing takeoffs and landings over densely populated areas prior to the date of this bulletin, may continue to operate over densely populated areas under the authority of the original authorization. Those operators need not reapply to the FSDO, MIDO or MISO for additional authorizations.

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